Finland: RAWS Technology Study
Helsinki, Finland
February 22 – March 1, 2002

Purpose and Background:
The National Office of Fire and Aviation's Remote Sensing/Fire Weather Support Unit (RSFWSU) is viewed within the wildland fire community and by many federal agencies as a leader in defining and providing remote weather and resource management technology. This unit now provides calibration and maintenance for remote automatic weather stations (RAWS) and instrumentation for all federal wildland fire agencies and several other agencies. The unit's equipment has been in use at "Ground Zero" in New York City providing the EPA with vital current weather information and particulate sampling to provide safety related information for workers at Ground Zero and residents around the site.

In order to keep their knowledge and skills at the cutting edge of this technology, Mr. Sielaff, Unit Leader, Remote Sensing/Fire Weather Support, and Mr. McCormick, Field Section Supervisor, Field Section, were invited to travel to Helsinki, Finland to meet with personnel from the Vaisala Corporation to discuss future development activities and needs. Vaisala bought the U.S. based Handar Corporation which provided RAWS units to BLM in the past. Vaisala continues to be the prime provider of the RAWS unit. Vaisala was very interested in receiving input on their prototype next generation fire RAWS in order to make final modifications and/or fine tune the equipment prior to these systems being shipped to the NIFC later this year. Mr. Sielaff's and Mr. McCormick's participation with Vaisala at this point in the equipment development process provided for a better product for the ever increasing needs of this technology by resource managers and other agencies dealing with all-risk requirements.

Their Report:
On Monday, February 25th, we met Mr. Pekka Ketonen, President and CEO of Vaisala, and twenty-five members of his staff. He gave a short presentation on Vaisala and its corporate and product interests. Following his presentation, I gave an overview of NIFC, and the BLM fire and resource management activities. Since our primary focus for this trip was to be the second generation fire RAWS, we gave a power point presentation on the "NIFC Fire RAWS Program" and its application on interagency incident management endeavors. Bob McCormick then gave a power point presentation on our involvement at Ground Zero in New York City in support of the EPA and the World Trade Center disaster. These presentations generated much interest as we met with each division manager throughout the week.

The remainder of the week involved meetings with Mr. Mikka Aaltonen, Surface Weather Division, and Mr. Lauri Tuomaala, Sensor Systems Division discussing

the prototypes of the new second generation fire RAWS. This unit will be designated the “Incident Weather Observing Station (IWOS). It will have all the functionality of the fire RAWS, weigh about half (85 lbs.), and require only fifteen minutes to set up. However, IWOS will also support a full range of other non-traditional sensor packages. RSFWSU will receive the first prototype the end of the month. The second prototype will be available for fire season evaluation by mid-May. From this summer’s evaluations, final modifications and upgrades will be added for the first production runs in the fall. Mr. Pekka Puura, Product Designer, will work with fire RAWS crews during June field testing and evaluation of the prototypes.

Conclusions:
The trip was very beneficial for BLM. Vaisala is very interested in the Bureau’s entire remote sensing program. We observed new sensor and packaging technologies with present day field applications. Vaisala also displays a true eagerness and willingness to work with us on holding the line on engineering and up-front costs.

One final note, the Finnish people we met were enjoyably traditional European in their culture and mannerisms and extremely knowledgeable and professional in their interactions with us. Before leaving, we extended an open invitation to all Vaisala staff to stop in and see first-hand the many different aspects of NIFC